

## **REMARKS**

### **Status of the Claims**

The pending office action addresses pending claims 1-53. Claims 49-51 are currently withdrawn. By this response, Applicant amends claims 1, 19, 37, and 46. Claims 3, 21, 47, and 49-51 are canceled. Accordingly, reconsideration of claims 1, 2, 4-20, 22-46, 48, 52, and 53 is respectfully requested.

### **Amendments to the Claims**

Claim 1 is amended to include the recitations from allowable claim 3, utilizing language consistent with claim 1 when incorporating the recitations from claim 3. Claim 1 is also amended to correct a typographical error, replacing the word “defusing” with the word “defining”. Claim 19 is amended to include the recitation from allowable claim 21, and to utilize language consistent with claim 19 when incorporating the recitations from claim 21. Claim 37 is amended to clarify the elements to which the claim refers. Claim 46 is amended to include the recitations from allowable claim 47. Accordingly, the claim amendments to not introduce any new matter.

Claims 3, 21, and 47 are canceled. Claims 49-51, being in a withdrawn state, are also canceled to expedite prosecution of the present application. Applicant reserves the right to pursue any of the canceled claims in a follow-on continuing application without prejudice.

### **Allowable Subject Matter**

Applicant acknowledges with thanks the allowability of claims 3-14, 17, 18, 21-32, 35, 36, 38-44, 47 and 48 if rewritten in independent form including all limitations of the base claim and any intervening claim from which they depend.

### **Nonobviousness**

The Examiner has rejected claims 1, 3, 15, 17, 19, 20, 33, 34, 37, 45, 46 and 52-53 under 35 U.S.C. §103(a) as being unpatentable over U.S. 6,156,007 to Ash (herein “Ash”). Applicant believes that the claims are patentable over the cited art. For example, though the Office Action suggests that a pump stroke volume greater than the fluid carrier volume is obvious to a skilled

artisan, there is absolutely no hint or suggestion in the cited art to design a pump stroke volume according to the recitations of the claims. As well, though the Office Action suggests that a fluid carrier volume in the range of less than 30% to less than 60% of the pump stroke volume shows the lack of criticality of the value, Applicant suggests that the range is indicative of an aspect of the invention. Again, the Office Action does not present any art that suggests or hints of these aspects of the claimed invention.

Nonetheless, Applicant presents the aforementioned amendments to expedite prosecution of the present application. Applicant's amendments should not be interpreted as any change in the position that the former claims are patentable over the cited art. Accordingly, Applicant maintains the right to pursue any former form of the claims without prejudice in a continuing application.

Claim 1 is amended to incorporate the recitations of allowable claim 3. Accordingly, the claim is patentable for at least this reason. Claims 2, 4-18, and 52 all depend ultimately from amended claim 1. Accordingly, they are also patentable for at least the same reasons that claim 1 is patentable. The cancellation of claim 3 renders its rejection moot.

Claim 19 is amended to incorporate the recitations of allowable claim 21. Accordingly, the claim is patentable for at least this reason. Claims 20, 22-36, and 53 all depend ultimately from amended claim 19. Accordingly, they are also patentable for at least the same reasons that claim 19 is patentable. The cancellation of claim 21 renders its rejection moot.

Claim 37, as originally filed, includes a recitation that "the pump defining a stroke volume, the heat exchange conduit volume defined by the at least one heat exchange conduit being greater than the stroke volume defined by the pump." Accordingly, this recitation is similar to the recitations of former claims 3 and 21, which were found to be allowable in the Office Action. Accordingly, Applicant contends that claim 37 is patentable for at least the same reasons that claims 1 and 19 are patentable. Claims 38-45 all depend ultimately from claim 37. Accordingly, these claims are all patentable for at least the same reasons that claim 37 is patentable.

Finally, claim 46 is amended to include all the recitation of allowable claim 47. Accordingly, the claim is patentable for at least the same reasons that claim 47 is patentable.


Claim 48, dependent from claim 46, is allowable for at least the same reason that claim 46 is allowable.

**CONCLUSION**

Allowance of the claims 1, 2, 4-20, 22-46, 48, 52, and 53 is respectfully requested. The Examiner is invited to contact the undersigned if any discussion of an aspect helps expedite prosecution of the pending application.

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